UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,322	08/02/2001	Keunsuk P. Chang	1151-01	5050

35811 7590 07/18/2003

IP DEPARTMENT OF PIPER RUDNICK LLP
3400 TWO LOGAN SQUARE
18TH AND ARCH STREETS
PHILADELPHIA, PA 19103

EXAMINER
JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
1773	7

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)
	09/921,322	CHANG ET AL.
	Examiner	Art Unit
	Monique R Jackson	1773

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The amendment filed 5/1/03 has been entered. Claims 1-44 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ristey et al (USPN 5,851,610) in view of Nagai et al. Ristey et al teach shrink films and articles including the same wherein the shrink film comprises a biaxially oriented polymer film comprising a polypropylene core layer having a Young's modulus, an elongation and a tensile strength within the instantly claimed ranges wherein the film is stretched for example by a ratio of 7 in the machine direction and tranverse direction and the film may further comprise thinner coextruded skin layers on either or both sides of the core wherein the skin layer(s) comprise proplyene co or terpolymers such as with ethylene and or butene, preferably a propylene copolymer with no more than 7% ethylene, and a slip additive such as wax, silica particulate or polysiloxane, in amounts within the instantly claimed range, wherein the film surface may be modified by corona discharge treatment and the film may be metallized (Examples, particularly I-1B; Col. 32, lines 45-58; Col. 36, lines 40-53.) Ristey et al teach that the film preferably has a thickness within the range of about 50 to 200 gauge (Col. 6, lines 23-33.)

4. Ristey et al do not teach the optical density of the metallized layer or the thickness of the individual skin layers as instantly claimed. However, given that thickness of the layers and optical density of the metallized layer are result-effective variables affecting the mechanical

properties of the film particularly the barrier properties of the film, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum thickness of the core and skin layers and the optimum thickness or optical density of the metallized layer to provide the desired barrier properties for a particular packaging end use wherein it is noted that Nagai et al teach a metallized multilayer packaging film having suitable thickness values within the instantly ranges. Further, though Ristey et al teach that various additives may be incorporated into the film including waxes and polysiloxanes, Ristey et al do not specifically teach several of the instantly claimed additives such as hydrocarbon resins and additive amounts as claimed however as taught by Nagai et al these additives and amounts are conventional in the art and one having ordinary skill in the art at the time of the invention would have been motivated to utilize any of the conventional additives taught by Nagai et al in suitable amounts to provide the desired additive property and further to utilize any conventional wax material as the slip agent in the skin layers of the invention taught by Ristey et al.

5. Claims 1-21 and 23-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al in view of Ristey et al. Nagai et al teach a metallized biaxially oriented polypropylene film comprising an isotactic polypropylene base layer; a surface layer comprising polypropylene and ethylene propylene random copolymer with 4.8wt% ethylene, on one side of the base layer having a thickness of 0.25μm or more and not more than one half of the thickness of the base layer; and a third layer that may be heat sealable on the opposite side of the base layer from the surface layer, comprising ethylene propylene copolymer, or ethylene propylene butene terpolymer or HDPE or mixtures thereof; and an aluminum metal layer deposited on the surface

layer to an optical density of 1.6 or more, preferably 1.8 or more, which would corresponds to a thickness with the instantly claimed range; wherein for stronger adhesiveness to the metal layer, petroleum or terpene resin is incorporated into the surface layer in an amount up to 20wt parts per 100 wt parts of the surface layer and may further comprise a small amount of crosslinked silicone or PMMA particles; wherein the surface layer is further treated by corona discharge treatment; wherein the film is coextruded and then biaxially stretched by a ratio of 4 to 7 in the machine direction and 7 to 11 in the tranverse direction; wherein the third or heat sealable layer may comprise organic crosslinked particles such as crosslinked silicone particles as an antiblocking agent and may be further corona discharge treated; and wherein Nagai et al specifically teach examples that generally read upon the instantly claimed invention including stretching ratios, layer thickness, additive amounts and ethylene content in the heat seal layer (Abstract; Col. 4-10; Examples.)

6. Nagai et al however do not teach that the biaxially oriented film has a Young's modulus, elongation and tensile strength as instantly claimed. However, Ristey et al teach that improved mechanical properties or shrinkage of a biaxially oriented polypropylene film can be obtained wherein the biaxially oriented film preferably exhibits a Young's modulus, an elongation and a tensile strength within the instantly claimed ranges (Abstract; Col. 5, lines 1-60; Col. 10, lines 40-50; Col. 12, lines 24-35; Examples.) Hence, one having ordinary skill in the art at the time of the invention would have been motivated to provide the film taught by Nagai et al with the improved properties as taught by Ristey et al wherein the film has a Young's modulus, an elongation and a tensile strength within the instantly claimed ranges.

7. Claims 22 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai in view of Ristey et al and in further view of Isaka et al (USPN 4,343,852) or Migliorini et al (USPN 5,194,318) or Murschall et al (USPN 5,366,796.) The teachings of Nagai in view of Ristey et al are discussed above. Nagai et al do not teach the incorporate of a slip agent such as a polyethylene wax as instantly claimed into the surface layer. However, Nagai et al do teach that organic or inorganic particles can be added to give slipperiness to improve working convenience and windability. Further, it is well known in the art that lubricants and/or antiblocking agents are conventional additives in the art as taught by Ristey et al, Isaka et al, or Migliorini et al or Murschall et al, wherein Ristey et al teach that slip additives such as wax, silica particulate or polysiloxane, in amounts within the instantly claimed range are provided in the skin layer(s) to improve processability of the film. Isaka et al teach that incorporation of a lubricating agent such as polyethylene waxes and/or an antiblocking agent in an amount of 0.1 to 3 parts by weight is effective in improving the lubricity and antiblocking properties of the surface layer. Migliorini et al also teach the incorporation of a minor about of about 10wt% of microcrystalline wax in a polyolefin skin layer to be metallized; and Murschall et al teach that the outer layers of a polyolefin film can further contain known additives such as antistatics, antiblocking agents and lubricants such as waxes in a range 0.1 to 3wt%, to improve certain properties of the polyolefin film. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a conventional lubricant such as polyethylene waxes into the surface layer taught by Nagai et al in view of Ristey et al utilizing routine experimentation to determine the optimum amount to provide the desired slipping and/or antiblocking properties for a particular end use.

Response to Arguments

8. Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Monique R. Jackson
Patent Examiner
Technology Center 1700
July 14, 2003